TACTICAL MEDICINE

POST2007TPS-0390

Operational Programs
AND
Standardized Training Recommendations

California POST —IN COLLABORATION WITH—
Emergency Medical Services Authority

California POST

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Operational Programs AND Standardized Training Recommendations

PRODUCED IN
COLLABORATION WITH
Emergency Medical Services Authority

POST2007TPS-0390

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TACTICAL MEDICINE OPERATIONAL PROGRAMS AND STANDARDIZED TRAINING RECOMMENDATIONS

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MISSION

The mission of the California Commission on Peace Officer Standards and Training is to continually enhance the professionalism of California Law Enforcement in serving its communities.

The mission of the Emergency Medical Services (EMS) Authority is to ensure quality patient care by administering an effective statewide system of coordinated emergency medical care, injury prevention, and disaster medical response. The EMS Authority is also responsible for leadership in developing and implementing EMS systems throughout California and setting standards for the training and scope of practice of various levels of EMS personnel.

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This Tactical Medicine Operational Programs and Standardized Training Recommendations guideline manual could not have been developed without the combined efforts of a number of dedicated individuals and interested parties.

POST and the Emergency Medical Services Authority (EMSA) would like to extend its gratitude to the law enforcement and emergency medical service professionals who gave of their time and expertise to contribute to the success of this project.

Representatives of the following stakeholder groups participated in this project:

California Association of Tactical Officers (CATO)
California Ambulance Association (CAA)
California Emergency Medical Services Authority (EMSA)
California Fire Chiefs' Association (CFCA)
California Highway Patrol (CHP)
Emergency Medical Services Administrators' Association (EMSAAC)
Emergency Medical Directors' Association of California (EDMAC)
Huntington Beach Police Department
Illinois Department of Public Health – Tactical EMS Committee
International School of Tactical Medicine (ISTM)
Los Angeles County Sheriff's Department
Palm Springs Police Department
San Diego Police Department
San Francisco Police Department

FOREWORD

The tactical incident response environment presents unique challenges to law enforcement personnel and for the personnel providing emergency medical care and support services in that environment. Tactical medical care providers must have a clear understanding of and consideration for law enforcement response and tactics and the mission-specific objectives of a tactical operation when planning for and providing medical support. The primary goal of tactical medicine is to support and assist a tactical team in accomplishing its mission during a deployment or response to a critical incident.

Penal Code Section 13514.1 directs the Commission to develop and disseminate guidelines and standardized training recommendations for law enforcement officers, supervisors, and administrators, who are assigned to perform, supervise, or manage Special Weapons and Tactics (SWAT). Those guidelines were released in 2005.

Significant progress, growth and advancement in tactical medicine training and education have occurred over the last two decades and this has resulted in the development of specific training programs for tactical medicine providers and operators. The tactical medicine guidelines for operational programs and standardized training address critical legal and practical issues of the tactical medicine component of SWAT operations identified in the POST SWAT Guidelines.

Additionally, the State of California Emergency Medical Services (EMS) Authority provides the state oversight and regulation to the provision of emergency medical care and EMS training. The partnership between POST and EMS Authority in the development of the Tactical Medicine Operational Programs and Standardized Training Recommendations manual provides an essential linkage between the critical nature of law enforcement and emergency medical care.

The Tactical Medicine Operational Programs and Standardized Training Recommendations reflect contemporary thinking and were jointly developed by POST, the Emergency Medical Services (EMS) Authority, and dedicated law enforcement and medical professionals statewide.

Questions concerning the core competencies and training recommendations may be directed to Senior Consultant Donald Lane at (916) 227-5562 or by email to Donald.Lane@post.ca.gov Questions pertaining to medical certifications and training requirements may be directed to the Emergency Medical Services Authority at (916) 322-4336.

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CONTENTS

INTRODUCTION

This guide is designed to provide baseline development and implementation standards for Tactical Medicine programs developed as required by POST and described in the SWAT Guidelines approved in 2005. The California Emergency Medical Services Authority (EMSA) is responsible for setting the statewide medical standards utilized by POST. As such, this guide is intended to serve as a template for the development of operational programs that are developed by any public safety agency in California, and to serve as the minimum standard for initial tactical medicine training.

POST Operational Guidelines for SWAT (2005) identified the need for tactical medicine as an integral part of the law enforcement tactical team. Under the Chapter 5 – Planning section of the SWAT Guidelines it states:

5.5 … SWAT teams should incorporate medical emergency contingency planning as part of the SWAT operational plan.

> *Where resources allow, consideration should be given to integrating Tactical Emergency Medical Support (TEMS) personnel within the structure of the SWAT team.*

Additionally, a Basic SWAT Team Operational Component has been identified as "medical support" under the Command and Control Element in the guidelines.

This guide is also meant to serve as a companion document to the POST Operational Guidelines for SWAT (2005). It describes the critical role that tactical medical planning and threat assessment plays in the overall contingency planning as part of the SWAT operational plan.

The public safety agency developing a tactical medicine operational program should conduct a needs assessment to determine the level of emergency care required by the SWAT team to support the mission and operations. The operational program should consider the need for medical oversight and coordination with the local EMS agency, medical direction, use of Emergency Medical Technicians (EMTs), paramedics and other advanced life support personnel, and minimum training and equipment standards. The agency should develop policies and procedures for medical support during tactical operations.

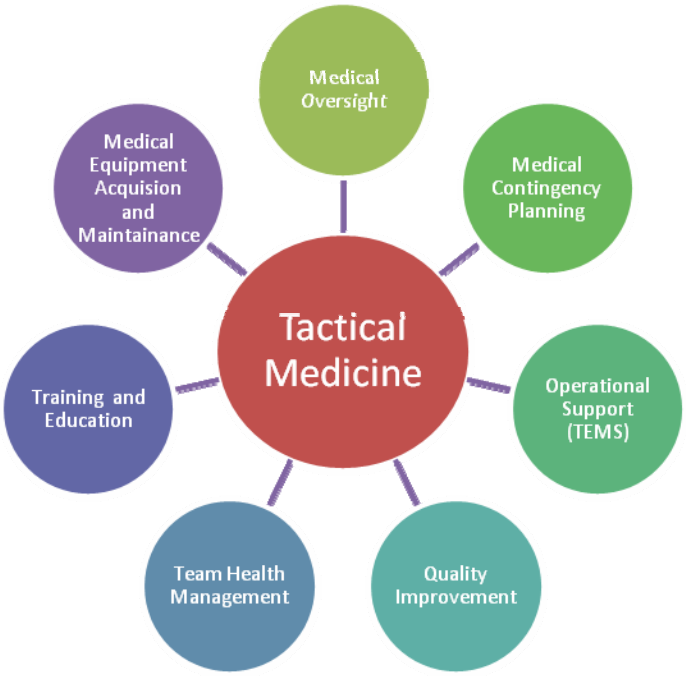
Approved tactical medicine training programs, which provide initial and refresher or update tactical medicine training to personnel, shall adhere to the minimum training guidelines and standards outlined in this document. The goal of this guidelines manual is to describe minimum core competencies and define the written and skills testing necessary to achieve the standards prescribed by POST and EMSA.

1.0 DEFINITION OF TACTICAL MEDICINE

"Tactical Medicine is defined as the delivery of medical services for law enforcement special operations".

A comprehensive Tactical Medicine Operational Program that is developed by a law enforcement agency should have the following seven (7) components as part of its planning, operations, and evaluation process.

- Medical Oversight
- Medical Contingency Planning
- Operational Support/Tactical Emergency Medical Support (TEMS)
- Quality Improvement
- Team Health Management
- Training and Education
- Medical Equipment Acquisition and Maintenance



Tactical Medicine operational programs should be developed to ensure that all components are developed to a level that allows for full integration within the SWAT operational program.

Identification of personnel to lead, manage, and coordinate a tactical medicine operational program are required. Additionally, trained Tactical Emergency Medical Services (TEMS) personnel to provide operational support are necessary. Overall, strong medical leadership should be incorporated within the operational program.

2.0 TACTICAL MEDICINE OPERATIONAL PROGRAM TRAINING POLICY REQUIREMENTS

2.1 Initial Training

Tactical medical team support personnel shall be deployed as part of a SWAT team only after successful completion of the POST-certified and EMSA-approved Tactical Medicine Course, or its equivalent as determined by the agency.

Appropriate training, prior to full deployment, should also be incorporated into agency policy.

2.2 Recurrent Core Competency Training

Tactical Medicine team personnel should participate in documented and verifiable monthly training to maintain individual and team core competencies as determined by the agency to support the overall SWAT team missions and operations performed.

Ongoing training in the respective core competencies should also be incorporated into agency policy and procedures.

Tactical Medicine recurrent Core Competencies fall within three general categories:

- Maintaining skill proficiencies and professional licensures/certifications
- Medical Equipment and Applications
- Medical care decision-making in a tactical environment

2.3 Update And Refresher Training

Tactical medicine personnel and supervisors, managers, and directors should attend 24 hours of POST-certified or EMSA-approved, or its equivalent as determined by the agency, update or refresher training, specific to the core competencies, every 24 months.

3.0 TACTICAL MEDICAL PLANNING AND THREAT ASSESSMENT

3.1 Medical Plan Initiation

Agencies should initiate a medical plan based on the operational mission. As the overall tactical mission is being identified the tactical medical support personnel should begin the process of assembling a medical plan that can be integrated into the overall tactical plan.

3.2 Medical Plan as a Resource

The medical plan is an integral part of the tactical operation and is an effective resource during any response to a critical incident. Medical support plans should be developed before any tactical medical support personnel arrive at an incident and should involve consultation with the tactical operation commander. The medical plan includes medical intelligence, tactical medical logistics, medical resources and coordination at all levels with the overall operational mission and response plan.

3.3 Medical Threat Assessment

A medical threat assessment should be conducted based on intelligence that has been gathered or identified and on the nature of the response or tactical operational needs. The Tactical Medic, using intelligence gathered should evaluate potential medical issues.

3.4 Incorporation of Medical Threat Assessment

The medical threat assessment should be incorporated, either formally or informally, into the overall tactical plan being used for the specific mission. When integrated into the overall tactical plan, the medical threat assessment and the tactical medical support personnel can be a significant resource that supports the Tactical Operations Commander who is ultimately responsible for resolving the incident in a safe and professional manner.

3.5 Medical Plan for Each Response

The Medical Plan should be one of the elements that are identified and considered for each response to a critical incident. While everything cannot be pre-planned, proper pre-planning and training plays an important and critical role in being able to provide an effective resource that contributes to the successful resolution to any critical incident response.

4.0 TACTICAL MEDICINE OPERATIONAL PROGRAMS

4.1 Tactical Medicine Operational Programs

(a) A law enforcement agency with a tactical medicine operational program should establish policies and procedures for the planning, operation, and evaluation of its program. These policies and procedures shall address the minimum tactical medicine components described in these guidelines.

(b) A law enforcement agency with an approved tactical medicine operational program should:
(1) Provide tactical emergency medical services as necessary, to the law enforcement agency on a continuous twenty-four hours per day basis, as determined by the law enforcement agency.
(2) Utilize and maintain telecommunications, including communications with base hospitals.
(3) Maintain a minimum equipment and supply list (See Section 6.0), and a drug and solution inventory as specified by the local EMS agency of equipment and supplies commensurate with the authorized scope of practice of the tactical emergency medical personnel (See Section 7.0).
(4) Have a written agreement with the local EMS agency to participate in the EMS system and to comply with all applicable State regulations and local medical policies and procedures (See Section 8.0).

(5) Be responsible for assessing the current knowledge of their tactical emergency medical services personnel in local policies, procedures and protocols and for skills competency.

(c) An agency establishing a tactical medicine program should establish a tactical medical policy concerning their personnel, to include but not be limited to:

(1) Tactical medical training required of team members, utilizing a POST-approved Tactical Medicine course
(2) Level of medical licensure or certification required by individual tactical medical personnel
(3) Any additional medical training requirements
(4) Deployment of tactical medical personnel
(5) Determination of peace officer status of tactical medical personnel

(d) No law enforcement agency shall advertise itself as providing tactical medicine services unless it does, in fact, routinely provide these services as part of a tactical medicine operational program that meets the requirements of these guidelines.

(e) No responding tactical unit shall advertise itself as providing paramedic services unless it does, in fact, provide these services and meets the requirements of subsection (a) of this section.

(f) Tactical Medicine programs and their medical personnel shall be integrated into the local EMS system, in coordination with the local Emergency Medical Services (EMS) Agency. This shall be in accordance with applicable statutes and regulations.

(g) Tactical Medicine operational programs should designate the following personnel:
(1) Tactical Medicine Program Director
At a minimum each tactical medicine program should have a program director that has tactical medicine training, as defined within the POST and EMSA core competencies.
(2) Tactical Medicine Medical Director
A Tactical Medicine program should have a Medical Director, who shall be a physician currently licensed in California, to provide medical direction, continuous quality improvement, medical oversight, and act as a resource for medical contingency planning, when necessary. The Medical Director shall have sufficient knowledge in tactical medicine to oversee the program and may also serve as the program director.

(3) Personnel Trained in TEMS
At a minimum, all personnel who are tactical medical providers should have certification at the basic life support level. Optimally, tactical medical programs should utilize personnel licensed or certified at the advanced life support level. This may include any combination of physicians, mid-level providers, registered nurses, paramedics, and Advanced EMT/EMT-IIs operating under their authorized scope of practice. See Appendix A for scope of practice. All personnel must have tactical medical training, as defined within the POST and EMSA guidelines.

(h) Agencies should develop policies regarding the use of firearms by tactical medical personnel. It is a desirable goal to enable each tactical and medical officer to safely function as a team member. It is recognized that liability concerns are a challenging issue, and each department should evaluate their needs individually.

4.2 Tactical Medicine Contingency Planning

Each Tactical Medicine Operational Program that is developed by a law enforcement agency should have the following seven (7) components as part of its planning, operations, and evaluation process.

4.2.1 Medical Oversight
Medical oversight refers to advice and direction provided by the program director and/or the Medical Director to trained tactical medical personnel who provide medical care in all aspects of tactical operations.

4.2.2 Medical Contingency Planning
Medical Contingency Planning is the inclusion of medical personnel in pre-event planning and preparation. Tactical medical personnel should participate in the development phase of mission planning and risk assessment to ensure appropriate assets are in place for the identified mission parameters.

Considerations should include appropriate resources and trained medical personnel, and may include, but are not limited to ground ambulance standby, air ambulance availability, and transport to specialized hospital facilities, including trauma centers.

4.2.3 Operational Support (TEMS)
TEMS refers to Tactical Emergency Medical Support, which is the operational support component of the discipline of Tactical Medicine. If available, tactically trained medical personnel should be deployed and utilized during SWAT operations.

This operational unit is a designated group of medical personnel, preferably at the advanced life support level, specifically selected, tactically trained, and equipped to provide medical care during critical law enforcement incidents and planned events.

4.2.4 Quality Improvement and Post Incident Analysis
Quality improvement is the ongoing and active review of medical involvement in tactical operations for the purpose of improved patient care and operational outcomes. The Medical Director provides continuous quality improvement oversight. Tactical medical personnel, if deployed, should participate in post-incident analysis and debriefings. Appropriate documentation of patient contact must be completed in accordance with State regulations and local policies.

4.2.5 Team Health Management

Team health management is a critical component of operational effectiveness. The tactical medic can be a health advocate and make recommendations for physical conditioning, diet, mental health and preventive care. For agencies that choose to utilize a licensed physician as a component of their tactical medicine program, the physician can be a resource to enhance the total well being of the SWAT team members.

4.2.6 Training, Education and Sustainability

Tactical Team members should not be deployed in the role of tactical medical provider until successful completion of Tactical Medicine training approved by POST and EMSA.

Tactical medical providers should successfully complete 24 hours of POST-certified tactical medicine refresher training every 2 years to maintain competency and proficiency (See Section 2.0). Refresher training can be achieved through continuing education or an approved refresher course based on the agency's decision.

The Tactical Medicine program should include training to non-medical team members in basic medical care procedures in a tactical environment.

All tactical medical personnel shall maintain state licensure or certification and local accreditation as appropriate for skill level of the individual.

Tactical medical personnel shall comply with ongoing training and education in accordance with departmental standards and policy.

4.2.7 Medical Equipment Acquisition and Maintenance

Tactical medical providers should be adequately equipped to meet the specific mission identified by the agency. The tactical medical provider should be equipped with the necessary basic and advanced medical supplies and equipment for their level of licensure or certification.

Medical equipment used by the tactical medical providers should be agency-issued and approved by the program director and/or Medical Director, including any modifications, additions, or attachments.

Equipment should be maintained regularly to ensure it is in good working order prior to deployment. This should include regular checks of inventory as well as its function. Expiration of supplies including medications should be checked regularly.

Each operational tactical medicine program should establish a standardized list of medical equipment and supplies (See Section 11.0) for each level of team member to include:

Individual Tactical Team Member
TEMS, Basic Life Support (BLS)
TEMS, Advanced Life Support (ALS)

5.0 TACTICAL MEDICINE TRAINING PROGRAMS

5.1 Approved Tactical Medicine Training Programs

(a) The purpose of a Tactical Medicine training program shall be to prepare individuals to render prehospital basic life support and advanced life support at the scene of an emergency, under tactical law enforcement conditions, at the level their licensure or certification allows.

(b) Tactical medicine training may be offered only by approved training programs.

Eligibility for program approval shall be limited to:
(1) Accredited universities and colleges including junior and community colleges, and school districts,
(2) Medical training units of a branch of the Armed Forces including the Coast Guard of the United States,
(3) Law Enforcement Agencies in California,
(4) Agencies of government, including public safety agencies,
(5) Private Training Programs, when affiliated with a law enforcement or public safety agency,
(6) Local EMS agencies.

5.2 Procedure for Program Approval

(a) Eligible training programs may submit a Course Certification Program request for Tactical Medicine program approval to POST pursuant to Regulation 1005 (f) and Commission Procedures D-2 and D-6. The Course Certification Package must be submitted electronically using the POST Electronic Data Interchange (EDI) system.

(b) POST shall review and approve the following prior to approving a tactical medicine training program:
(1) A statement verifying usage of a POST and EMSA curriculum which includes learning objectives, skills protocols, and treatment guidelines.
(2) Samples of any written and skills examinations used for periodic testing.
(3) A final skills competency examination.
(4) A final tactical medical scenario examination,
(5) A final written examination.
(6) The name and qualifications of the program director, program clinical coordinator, tactical coordinator and principal instructor(s).
(10) The location at which the courses are to be offered and their proposed dates.
(11) Table of contents listing the required information listed in this subsection, with corresponding page numbers.

(c) In addition to those items listed in subdivision (b) of this section, the POST and EMS Authority shall assure that a training program meets the following criteria in order to approve that agency as qualified to conduct a tactical medicine training program:
(A) POST and EMSA shall ensure that a training program designates a liaison to local EMS agency for the county in which the training is conducted; and
(B) Consult with the local EMS agency for the county in which the training is located if the program is developing an EMS system orientation portion of the tactical medicine course.

5.3 Program Approval

(a) In accordance with Section 5.2 (a) POST, in collaboration with the EMS Authority shall notify the training program submitting its request for training program approval that:
(1) The request has been received,
(2) The request contains or does not contain the information requested in Section 5.2 of this Chapter and POST Regulations 1005(f) and 1084,
(3) What information, if any, is missing from the request.

(b) Program approval or disapproval shall be made in writing by the POST to the requesting training program within 60 day after receipt of all required documentation.

(c) POST shall establish the effective date of program approval in writing upon the satisfactory documentation of compliance with all program requirements. No retroactive certifications will be approved.

(d) Program approval shall be for two (2) years following the effective date of program approval and may be renewed subject to the procedure for program approval specified in this section.

5.4 Instructional Staff

Each tactical medicine training program shall provide for the functions of administrative direction, medical quality coordination, tactical coordination and instruction and actual program instruction. Nothing in this section precludes the same individual from being responsible for more than one of the following functions if so qualified by the provisions of this section:
(a) Each tactical medicine training program shall have an approved program director who shall be qualified by education and experience in methods, materials, and evaluation of instruction.

(b) Duties of the program director, in coordination with the program clinical coordinator and tactical coordinator, shall include but not be limited to:
(1) Administering the training program.
(2) Approving course content.
(3) Approving all written examinations and the final skills examination.
(4) Coordinating all clinical and field activities related to the course.
(5) Approving the principal instructor(s) and teaching assistants.
(6) Signing all course completion records.

(7) Assuring that all aspects of the tactical medicine training program are in compliance with these guidelines and other related laws.
(8) Maintaining records in accordance with federal, state and local regulations.

(c) Each training program shall have an approved program clinical coordinator who shall be either a physician, registered nurse, physician assistant, or a paramedic currently licensed in California, and who shall have two (2) years of academic or clinical experience in emergency medicine or prehospital care in the last five (5) years. Duties of the program clinical coordinator shall include, but not be limited to:
(1) Responsibility for the overall quality of medical content of the program;
(2) Approval of the qualifications of the principal instructor(s) and teaching assistant(s).

(d) Each training program shall have an approved program tactical coordinator who shall have experience and education in law enforcement special operations, and who shall have two (2) years of academic or law enforcement experience in the last five (5) years. Duties of the program tactical coordinator shall include, but not be limited to:
(1) Responsibility for the overall quality of tactical content of the program;
(2) Approval of the qualifications of the principal instructor(s) and teaching assistant(s).

(e) Each training program shall have a principal instructor(s), who may also be the program clinical coordinator, program tactical coordinator, or program director, who shall be qualified by education and experience in methods, materials, and evaluation of instruction in medical or tactical topics.
(1) Principal instructors should complete an instructor development course.

(f) Each training program may have teaching assistant(s) who shall be qualified by training and experience to assist with teaching of the course and shall be approved by the program director in coordination with the program clinical coordinator or tactical coordinator as qualified to assist in teaching the topics to which the assistant is to be assigned.

5.5 Didactic and Skills Laboratory

An approved tactical medicine training program shall assure that no more than six (6) students are assigned to one (1) principal instructor/teaching assistant during skills practice/laboratory sessions or as required by POST Course Safety Policy.

5.6 Program Review and Reporting

(a) All program materials specified in this Chapter shall be subject to periodic review by POST and the EMS Authority.

(b) All programs shall be subject to periodic on-site evaluation by the POST and the EMS Authority.

(c) Any person or agency conducting a tactical medicine training program shall notify the POST in writing, in advance when possible, and in all cases within thirty (30) days of any change in course content, hours of instruction, program director, program clinical coordinator, or program tactical coordinator. No presenter is authorized to modify any part of the course curriculum pursuant to Course Certification approval by POST and EMSA.

5.7 Withdrawal of Program Approval

Noncompliance with any criterion required for program approval, use of any unqualified teaching personnel, or noncompliance with any other applicable provisions of POST Regulations or Procedures may result in suspension or revocation of program approval by POST pursuant to course certification approval.

5.8 Components of an Approved Program

(a) An approved tactical medicine training program shall consist of all of the following:
(1) The training course, including psychomotor skills and tactical medical scenario experience;
(2) Periodic and a final written and skill competency examinations;
(3) Tactical Medical Scenario examinations; and
(4) A refresher or update course.

(b) POST may approve a training program that offers only refresher or update course(s).

5.9 Required Course Hours

(a) The initial tactical medicine course shall consist of not less than eighty (80) hours. These training hours shall be divided into:
(1) A minimum of forty hours of didactic instruction and skills laboratory;
(2) A minimum of sixteen hours of tactical weapons instruction, and
(3) A minimum of sixteen hours of simulated tactical medicine scenario practice, including force-on-force. The tactical medicine scenario simulations shall include twenty four patient contacts wherein a patient assessment and other tactical medicine skills are performed.
(4) The minimum hours may include the final examinations for tactical medicine certification.

(b) As an alternative to the full initial course, an alternative initial tactical medical course, consisting of no less than forty (40) hours, may be approved by POST, when that course admits only students that are all pre-qualified, and have all of the following pre-requisites:
(1) Current peace officers,
(2) Hold minimum certification of EMT-1 or higher,
(3) Completed WMD instruction, including medical care for WMD, and
(3) Completed a POST-approved Basic SWAT course.

5.10 Required Course Content

The minimum tactical medicine course content shall consist of the following topics, skills, and tactical medical scenarios. Specific required course content is described in detail in Section 6.0.

Mod #	Course Topic	Estimated Hours by Topic	Full Course Hours	Short Course Hours
	Admin			
1	Course Administration and Safety	1	1	1
	Medical			
2	Introduction to Tactical Medicine	2	2	2
3	Tactical Medical Equipment	1	1	1
4	Operational Casualty Care/TCC	2	2	2
5	Hemorrhage Control and Hemostatic Techniques and Dressings	1	1	1
6	Medical Aspects of Distraction Devices	1	1	1
7	Medical Aspects of Clandestine Drug Labs	1	1	1
8	Medical Aspects of Wound Ballistics	1	1	1
9	Team Health Management and Combat Physiology	1	1	1
10	Medical Management of K-9 Emergencies	1	1	
11	Medical Threat Assessment and Barricade Medicine	1	1	1
12	Pediatric Trauma Management Considerations	1	1	1
13	Pain Management	1	1	1
14	Advanced Airway Management in the Tactical Environment	1	1	1
15	Environmental Injuries in the Tactical Environment	1	1	1
16	WMD Biological Weapons I	1	1	
17	WMD Biological Weapons II	1	1	
18	WMD Chemical Weapons Nerve Agents and Toxins	1	1	
19	WMD Chemical Weapons Vesicants and Irritants	1	1	
20	WMD Nuclear and Radiation Injuries	1	1	
21	Medical Management of Blast Injuries	1	1	1
22	CBRNE Environments	1	1	
23	Medical Aspects of Chemical Agents	1	1	1
24	Special Operations Aeromedical Evacuation	1	1	
25	Medical Issues of Less Lethal Weapons	1	1	1
26	Basic TacMed Skills Lab	3	3	3
27	Advanced TacMed Airway and Trauma Skills Lab	3	3	3
28	ICS, Multi-casualty and Triage Problem Solving in a Tactical Environment	1	1	1

Mod #	Course Topic	Estimated Hours by Topic	Full Course Hours	Short Course Hours
29	Low Light Medical Assessment and Treatment	1	1	1
	Tactical			
30	Tactical Equipment	1	1	
31	Tactical Team Concepts and Planning	2	2	
32	Forensics and Evidence Preservation	1	1	
33	Explosive Entry Techniques	1	1	
34	Disguised Weapons and Street Survival	1	1	
	Tactical Individual and Team Movement			
35	Team Movement Exercises	2	2	
36	Covert Team Movement Techniques	2	2	
37	Dynamic Clearing Techniques and Team Movement	2	2	
	Tactical Firearms and Range			
38	Introduction to Tactical Firearms:	16	16	
	(a) Tactical Pistol			
	(b) Submachine Gun/Shoulder Fired Weapons			
	(c) Low Light Techniques			
	Reality Based Scenario Training			
39	Tactical Medical Scenario, Reality-Based Training	9	9	9
	(a) Basic Tactical Medical Scenarios (6)			
	(b) Advanced Tactical Medical Scenarios (6)			
	(c) Low Light Tactical Medical Scenarios (6)			
	Competency Testing			
40	Basic Tactical Medical Scenarios, Part I, Evaluation (6)	3	3	
41	Mid-Course Written Examination	1	1	
42	Final Written Examination (100 Question)	1	1	1
43	Advanced Tactical Medicine Scenario Exam (6)	3	3	3
	Course Totals	**80**	**80**	**40**

5.11 Required Testing

(a) Each approved tactical program shall include periodic and final competency-based examinations to test the knowledge and skills specified in these Guidelines, and shall include:
(1) A final written competency examination,
(2) A final Skills competency examination, consisting of the minimum psychomotor skills identified in the Guidelines,
(3) A final tactical medicine scenario examination. The tactical medicine scenario examination shall include six patient contacts wherein a patient assessment and other tactical medicine skills are performed.

(b) Satisfactory performance in these written, skills, and scenario examinations shall be demonstrated for successful completion of the course. Satisfactory performance shall be determined by pre-established standards approved by POST and EMSA.

5.12 Course Completion Record

(a) An approved tactical medicine training program provider shall issue a tamper resistant course completion record to each person who has successfully completed the complete tactical medicine course, or refresher course.

(b) The course completion record shall contain the following:
(1) The name of the individual.
(2) The date of course completion.
(3) Type of tactical medicine course completed (i.e., Initial or refresher,), and the number of hours completed.
(4) The signature of the program director.
(5) The signature of the tactical director.
(6) The name and location of the training program issuing the record.

(c) This course completion record is valid to apply for certification for a maximum of two years from the course completion date and shall be recognized statewide.

(d) The name and address of each person receiving a course completion record and the date of course completion shall be reported in writing to POST within fifteen days of course completion using the POST Course Roster Form 2-111 as required by regulation.

6.0 TACTICAL MEDICINE REQUIRED COURSE CONTENT DESCRIPTION

The following required topics are identified as a detailed course content description of to supplement the required course content in Section 5.10. The noted hours for each topic are estimates of the time that will be required to complete that section.

1. Course Administration and Safety (1 hour)
   a. The student will complete course documentation in following areas:
      POST Course Registration
      California Emergency Medical Services Authority/ Local EMS Agency CE
      Administrative matters.

   b. The student will demonstrate competency in Safety in the following areas:
      Minimum Safety Requirements
      Reality-Based Safety
      Force-on-Force Safety
      Range Safety

2. Introduction to Tactical Medicine (2 hours)
   The student will demonstrate competency in the following areas:
      Historical development of Tactical Medicine
      Tactical medicine training program goals.
      Roles and responsibilities of the tactical medic.
      Operational standards
      Team structure and function
      Problems facing tactical teams
      Injuries and illnesses common to tactical operation.
      Uncommon but deadly conditions in the tactical environment
      Accessibility and civilian EMS interface
      Legal considerations
      Operational skills

3. Tactical Medical Equipment (1 hour)
   The student will demonstrate competency in the following areas:
      Design and construction features

Load bearing packs
Backpack designs
Trauma packs
Urban carry cases
Tactical medical utility vests
Self help kits
Flexible littler kits
Tactical extraction equipment
Belt systems
Specialty tactical medical gear

4. Operational Casualty Care/Tactical Casualty Care (2 hours)

The student will demonstrate competency in the following areas:

Tactical Combat Casualty Care Assessment and Treatment Model
Basic Wound Management
Situation assessment
Patient prioritization
Victim extraction
Point of relative safety
Airway management
C-Spine considerations
Field assessment & hemorrhage control
Shock recognition & management
Provisions for evacuation & transport
Advanced Wound Management
Fracture recognition & management
Gun Shot wound management
Management of burns in the field
Chest wound recognition & management
Open chest wound recognition & management
Hemothorax & pneumothorax recognition & management
Abdominal injuries recognition & management
Extremity injuries recognition & management
Soft tissue injuries

5. Hemorrhage Control and Hemostatic Techniques and Dressings (1 hour)

The student will demonstrate competency in the following areas:

Concepts & Principals of Hemorrhage Control
Quantifying blood loss
Signs & Symptoms of shock
Hemorrhage control techniques
Hemostatic agent selection and application
Tourniquet use and application

6. Medical Aspects of Distraction Devices (1 hour)

The student will demonstrate competency in the following areas:

- Purpose and definition of distraction devices
- Correct and incorrect terminology
- Psychological effects
- Physiological effects
- Medical significance
- Safety concerns
- Panic and fear responses
- Effects on team and possible injuries
- Deployment options
- Immediate action drills

7. Medical Aspects of Clandestine Drug Labs (1 hour)

The student will demonstrate competency in the following areas:

- Health & safety concerns
- Hazard identification
- Activity patterns
- Designer drugs
- Exposure risks/ lab conditions
- Signs & symptoms of chemical exposure
- Response actions and procedures
- On-scene medical actions
- Personal safety protection

8. Medical Aspects of Wound Ballistics (1 hour)

The student will demonstrate competency in the following areas:

- Bullet types
- Temporary and permanent cavity
- High velocity injuries
- Low velocity injuries
- Scatter patterns
- Shotgun injury patterns
- Non-fragmenting high velocity injuries
- Wound patterns
- Gunshot wound myths
- Entrance vs. exit wounds

9. Team Health Management and Combat Physiology (1 hour)

The student will demonstrate competency in the following areas:

- Preventive evaluation & education
- Mental health issues in law enforcement

Incident debriefing & stress management
Substance abuse
Aggressive preventive health care
Cardiovascular fitness
Proper nutrition
Health screening techniques
Vitamins & minerals
Dangers of steroid use
Lifestyle concerns
Combat Physiology
Methicillin Resistant Staphylococcal Infections (MRSA)

10. Medical Management of K-9 Emergencies (1 hour)
The student will demonstrate competency in the following areas:
Handling an injured canine
Canine airway management
Canine CPR
Canine shock & field interventions
Canine wound & hemorrhage field management
Canine fracture recognition & field management
Smoke inhalation recognition & field management
Canine hyperthermia & hypothermia management
Canine poisoning field recognition & management
Transporting an injured K-9

11. Medical Threat Assessment & Barricade Medicine (1 hour)
The student will demonstrate competency in the following areas:
Planning advantages
Operational risk assessment
Mission operational security
Hazardous material threats
MTA resources
Biological threats
Data transfer
Information prioritization

12. Pediatric Trauma Management Considerations in the Tactical Environment (1 hour)
The student will demonstrate competency in the following areas:
Causes of pediatric death
Mechanisms of injury
Hemorrhage control techniques
Primary survey
Airway differences
Shock recognition & management

IV access techniques
Fluid therapy
Secondary survey
Pediatric trauma center considerations

13. Pain Management (1 hour)

The student will demonstrate competency in the following areas:

Pain control
Topical agents
Oral agents
Injectable agents
Injection techniques
Nerve block techniques
Narcotic options
Reversal agents
Anti-emetics
Conscious sedation options
Benzodiazepines
Induction agents
Rapid Sequence Intubation Drugs

14. Advanced Airway Management in the Tactical Environment (1 hour)

The student will demonstrate competency in the following areas:

Hostile environment
Cover & concealment
Light discipline
Weight & space constraints
Hot Zone issues
Warm Zone issues
Cold Zone issues
Field Rapid Sequence Intubation
Post intubation care

15. Environmental Injuries in the Tactical Environment (1 hour)

The student will demonstrate competency in the following areas:

Hyperthermia recognition & management
Hypothermia recognition & management
Snake bite management
Spider bite management
Scorpion bite management
Hymenoptera sting management
Anaphylaxis management
Poisonous plants recognition & management

16. Biological Weapons Part 1 (1 hour)
The student will demonstrate competency in the following areas:
- Characteristics of effective biological weapons
- Anthrax epidemiology & clinical features
- Anthrax treatment
- Plague epidemiology & clinical features
- Plague treatment
- Botulism epidemiology & clinical features
- Botulism treatment

17. Biological Weapons Part 2 (1 hour)
The student will demonstrate competency in the following areas:
- Tularemia epidemiology & clinical features
- Tularemia treatment
- Smallpox epidemiology & clinical features
- Smallpox treatment
- Smallpox vaccination
- Smallpox vaccination contraindications
- Vaccine complications
- Hemorrhagic Fever Viruses epidemiology & clinical features
- Hemorrhagic Fever Viruses treatment

18. Chemical Weapons Nerve Agents & Toxins (1 hour)
The student will demonstrate competency in the following areas:
- Neurotransmitter physiology
- Pre and post-ganglionic synapses
- Sympathetic synapses
- Neuromuscular junction
- Nerve agent physiology
- Nerve agent diagnosis
- Nerve agent treatment
- Ricin pathophysiology

19. Chemical Weapons Vesicants & Irritants Recognition and Management (1 hour)
The student will demonstrate competency in the following areas:
- Vesicant & Irritant agents
- Mustard mechanism of action
- Mustard characteristics
- Vesicant signs and symptoms
- Lewisite recognition & treatment
- Phosgene recognition & treatment
- Chlorine recognition & treatment
- Decontamination issues

20. Nuclear and Radiation Injuries (1 hour)
The student will demonstrate competency in the following areas:
- Ionizing radiation
- Non-ionizing radiation
- Basic physics
- Nuclear weapons
- Acute radiation syndrome
- Prodromal & Latent phase
- Manifest illness phase
- Recovery or death phase
- Triage & Treatment decision-making

21. Medical Management of Blast Injuries (1 hour)
The student will demonstrate competency in the following areas:
- Explosion physics
- Overpressure mechanics
- Shock wave components
- Primary blast injury (PBI)
- Blast lung pathophysiology
- Arterial air embolus (AAE)
- Primary blast injuries
- Secondary blast injuries
- Tertiary blast injuries
- Suicide bomber issues

22. Chemical, Biologic, Radiological, Nuclear, Explosive Environments (1 hour)
The student will demonstrate competency in the following areas:
- Scene safety
- Initial assessment
- Personal protective gear and equipment
- Perimeter security
- Containment
- Evacuation of casualties
- Agent identification
- Injury assessment

23. Medical Aspects of Chemical Agents in the Tactical Environment (1 hour)
The student will demonstrate competency in the following areas:
- Purpose and Deployment Options
- Indications for use
- Delivery systems
- Effects of exposure
- Lethal concentration computation
- Chemical agent exposure field management

Principles of field denomination
Site control & containment

24. Special Operations Aero-Medical Evacuation (1 hour)
The student will demonstrate competency in the following areas:
Operational Considerations
Logistical issues
Stresses of flight
Flight physiology
Indications for transport
Packaging for transport
Landing zone size requirements
Night operations
Operational & load calculations
Personal safety issues

25. Medical Aspects of Less Lethal Weapons (1 hour)
The student will demonstrate competency in the following areas:
Purpose & deployment of duty aerosols
Tactical deployment procedures
Use of force options
Direct fire munitions
Skip fire munitions
Multi launcher 37 & 40 mm
Impact munitions
Projectiles
Beanbags - Sting balls
Injury patterns

26. Basic Tactical Medical Skills Lab (3 hours)
The student will demonstrate competency in the following areas:
Safety and Personal Protective Equipment
Tactical Assessment and Treatment/TC2
Wound and Hemorrhage Control-Tourniquet Application
Basic Ventilation and Airway Management
IV and Saline Lock Insertion
Medication Administration
Cardiac and Circulatory Support--AED/CPR
Patient Extraction and Evacuation

27. Advanced Airway Management Skills Lab (3 hours)
The student will demonstrate competency in the following areas:
Basic Procedures & Techniques

Oral Endotracheal Intubation
Nasotracheal Intubation
Multi-lumen esophageal-tracheal airway techniques
Lightwand techniques
LMA techniques
Needle Cricothyroidostomy
Surgical Cricothyroidotomy
Retrograde Intubation
Digital Intubation
Needle Thoracostomy

28. Incident Command System, Multi-Casualty and Triage (1 hour)
The student will demonstrate competency in the following areas:
Incident Command System (ICS)
California Standardized Emergency Management System
National Incident Management System/National Response Framework
Triage Principles
START Triage
Multi-Casualty Incidents
Role of Triage, Treatment, and Transportation in Field Environment

29. Low Light Medical Assessment and Treatment (1 hour)
The student will demonstrate competency in the following areas:
Language and physics of light
Vision physiology
Battery basics
LED's
Reflectors and Lenses
Using hand held flashlights
Weapon light attachments
Movement with lights
Low light environments medical assessment

30. Tactical Equipment (1 hour)
The student will demonstrate competency in the following areas:
Tactical uniforms
Weapons systems
Ammunition selection
Body Armor
Communication equipment
Illumination tools
Entry tools
Breaching equipment
Personal gear

31. Tactical Team Concepts and Planning (1 hour)
The student will demonstrate competency in the following areas:
- Team purpose
- Team objectives
- Team responsibilities
- Team member selection process
- Team operational procedures
- Noise discipline
- Cover and concealment
- Team deployment and negotiation procedures
- Negotiation issues
- Medical threat assessment
- Hierarchy of threats

32. Forensics and Evidence Preservation (1 hour)
The student will demonstrate competency in the following areas:
- Tactical medic responsibilities
- Crime scene awareness
- Sources of evidence
- Evidence collection
- Chain of custody
- Search & seizure
- Documentation
- Clothing considerations
- On-scene legal considerations

33. Explosive Entry Techniques (1 hour)
The student will demonstrate competency in the following areas
- Purpose and function
- Evolution of explosive breaching methods
- Alternative breaching methods
- Breaching explosives types
- Shock tube priming systems
- Principles of cut, push, and blast
- Charge construction and selection
- Charge calculations
- Breaching hazards
- Target analysis
- Documentation and liability

34. Disguised Weapons (1 hour)
The student will demonstrate competency in the following areas:
- Concealment techniques

Edged weapons
Pocket pistols
Failure to search
Pen knives
Pen guns
Disguised weapons
Unconventional weapons
Survival issues
Evasive techniques

35. Team Movement Exercises (2 hours)
The student will demonstrate competency in the following areas:
Approaches
Initial entry
Stairs 1 & 2 man
Stairs 1 & 2 man with shields
Window entry / gun port
Slow & deliberate search
Use of shield as cover
Corners and angles
Movement to contact
Threat assessment
Shield man shooting

36 Covert Team Movement Techniques (2 hours)
The student will demonstrate competency in the following areas:
Definition of covert movement
Techniques of searching
Approach / Cover & Concealment
Teamwork concepts
Fundamentals of building clearing
Teamwork concepts
Methods for searching hallways
Methods for searching stairways
Methods for searching open areas
Methods for searching multiple rooms
Methods for searching warehouses
Techniques in the use of ballistic shields
Techniques using video equipment

37. Dynamic Clearing Techniques and Team Movement (2 hours)
The student will demonstrate competency in the following areas:
Immediate threat concept
Speed, Surprise and Shock action

Room entry and movement
Dealing with multiple threats
Clearing open areas
Movement in hallways
Movement in stairways
Tactical use of ladders
Clearing multiple rooms
Apprehension of unknowns and suspects

38. Introduction to Tactical Firearms (16 hours)

a. The student will demonstrate competency in Principles and Concepts of Tactical Pistol the following areas:

Nomenclature
Ammunition selection
Sight alignment
Stance
Grip
Control motion
Draw
Sight picture
Load and unload
Trigger control

b. The student will demonstrate competency in Operational Use of Shoulder-fired Tactical Weapons in the following areas:

Variations of weapons systems used
Nomenclature
Stance
Grip
Ready / carry positions
Load and unload
Trigger control
Front sight
Safety / Selector
Shooting positions

c. The student will demonstrate competency in Range Exercises with Tactical Pistol in the following areas:

Controlled pairs
Double taps
Failure drill
Shooting behind a barricade
Firing on the move

Multiple target engagement
Prone firing techniques
3 yard - line course of fire
7 yard – line course of fire
10 yard - line course of fire

d. The student will demonstrate competency in Range Exercises with Shoulder-fired Tactical Weapons in the following areas:

Controlled pairs
Double taps
Failure drill
Shooting behind a barricade
Firing on the move
Multiple targets
Prone firing
3 yard - line course of fire
7 yard - line course of fire
10 yard - line course of fire

e. The student will demonstrate competency in the Principles of low light shooting in the following areas:

Lighting tools review
Entry techniques
Fundamental tactical concepts
Using hand-held flashlight with firearms
Target identification
Low light engagements
Target illumination techniques
Single suspect
Multiple suspects
Conflict resolution

39. Tactical Medical Scenario, Reality-Based Training (9 hours)

a. The student will demonstrate competency in six (6) Multiple Simulated tactical situations or scenarios in the following Basic Tactical Medical simulated areas using the Tactical Casualty Care Assessment and Treatment Model.

b. The student will demonstrate competency in six (6) Multiple Simulated tactical situations or scenarios in the following Advanced Tactical Medical simulated areas using the Tactical Casualty Care Assessment and Treatment Model.

c. The student will demonstrate competency in six (6) Multiple Simulated tactical situations or scenarios in the following Low Light Tactical Medical simulated areas using the Tactical Casualty Care Assessment and Treatment Model.

Tactical Components
High Risk Warrant Service
Barricaded Subject
Hostage Rescue
Active Shooter

Medical Components
Treatment of hemorrhage
Airway management
Chest trauma
MCI
Nerve Agent
Clandestine Lab
Face / Neck wounds
Blast Injuries
GSWs
Extraction
Extremity penetrating wounds

40. Basic Tactical Medical Scenarios, Part I, Evaluation (3 hours)
The student will demonstrate competency in six (6) Multiple Simulated tactical situations or scenarios in the following Basic Tactical Medical simulated areas using the Tactical Casualty Care Assessment and Treatment Model:

41. Mid-Course Written Examination (1 hour)
The student will demonstrate competency in a written examination designed to test cognitive abilities over the first portion of tactical medicine course.

42. Final Written Competency Examination (1 hours)
The student will demonstrate competency in a written 100-question examination designed to test cognitive abilities over the entire tactical medicine course.

43. Tactical Medicine Scenario Examination (3 hours)
The student will demonstrate competency in six (6) Multiple Simulated tactical medical situations or scenarios using the Tactical Casualty Care Assessment and Treatment Model.

7.0 TACTICAL MEDICINE CLINICAL CORE COMPETENCIES--PSYCHOMOTOR

7.1 Psychomotor Skills Competencies

The skills of the tactical medical provider are perishable and should be developed and practiced as well as maintained by meaningful ongoing training exercises and an academic educational training program. Tactical medical team personnel should maintain and demonstrate these proficiencies by attending a P.O.S.T. certified tactical medicine update or refresher training program every 3 years.

7.2 Psychomotor Skills List

The following Nine (9) Skills Stations should be used to ensure Tactical Medicine Psychomotor Core Competencies during Training and Testing.

1. Safety and Personal Protective Equipment (PPE)
   Body Substance Isolation (gloves, mask – N95 minimum, eyewear)
   Tactical Equipment
   Gas Mask

2. Tactical Casualty Care Assessment and Treatment Model
   Evaluate single/multiple Victims (Tactical Combat Casualty Care)
   Ongoing Patient Management
   Shock Recognition and Treatment
   Regular Re-Assessment (monitoring)

3. Basic Airway and Ventilation Techniques
   Head Tilt/Chin Lift
   Rescue Positioning
   Nasopharyngeal Airway
   Chest Seal for open chest wound
   Mouth-Valve-Mask, Bag-Valve-Mask
   Manual Suction Device

4. Advanced Airway and Ventilation Techniques*
   Needle Thoracostomy
   Needle Cricothroidotomy
   Oral Endotracheal Intubation
   Surgical Airway Techniques
   Perilaryngeal airway adjunct device
   Other airway adjuncts

5. Hemorrhage Control *
   Direct Pressure
   Inflow Compression
   Tourniquet Application and Use
   Hemostatic Agent Application

6. Wound Management
   Trauma Dressing Application
   Lacerations
   Ocular injuries
   Open chest wounds
   Burns - Blast injuries

7. Intravenous Access Techniques *
   IV Insertion
   Saline Lock
   Intraosseous Placement

Fluid Administration strategies and techniques

8. Medication Administration Techniques*
   Nerve Agent antidote
   Epinephrine for injection
   Intra-muscular injection site selection

9. Patient Extraction and Evacuation
   Dragging Techniques
   Soft Litter
   Manual Carry
   Other Methods
   Civilian/EMS Interface – transfer of care

* If applicable within Authorized Scope of Practice

7.3 Evaluation Form for Psychomotor Skills

Instructors should utilize standard forms for the individual student evaluation of psychomotor skills competency testing.

8.0 TACTICAL MEDICINE SCENARIOS

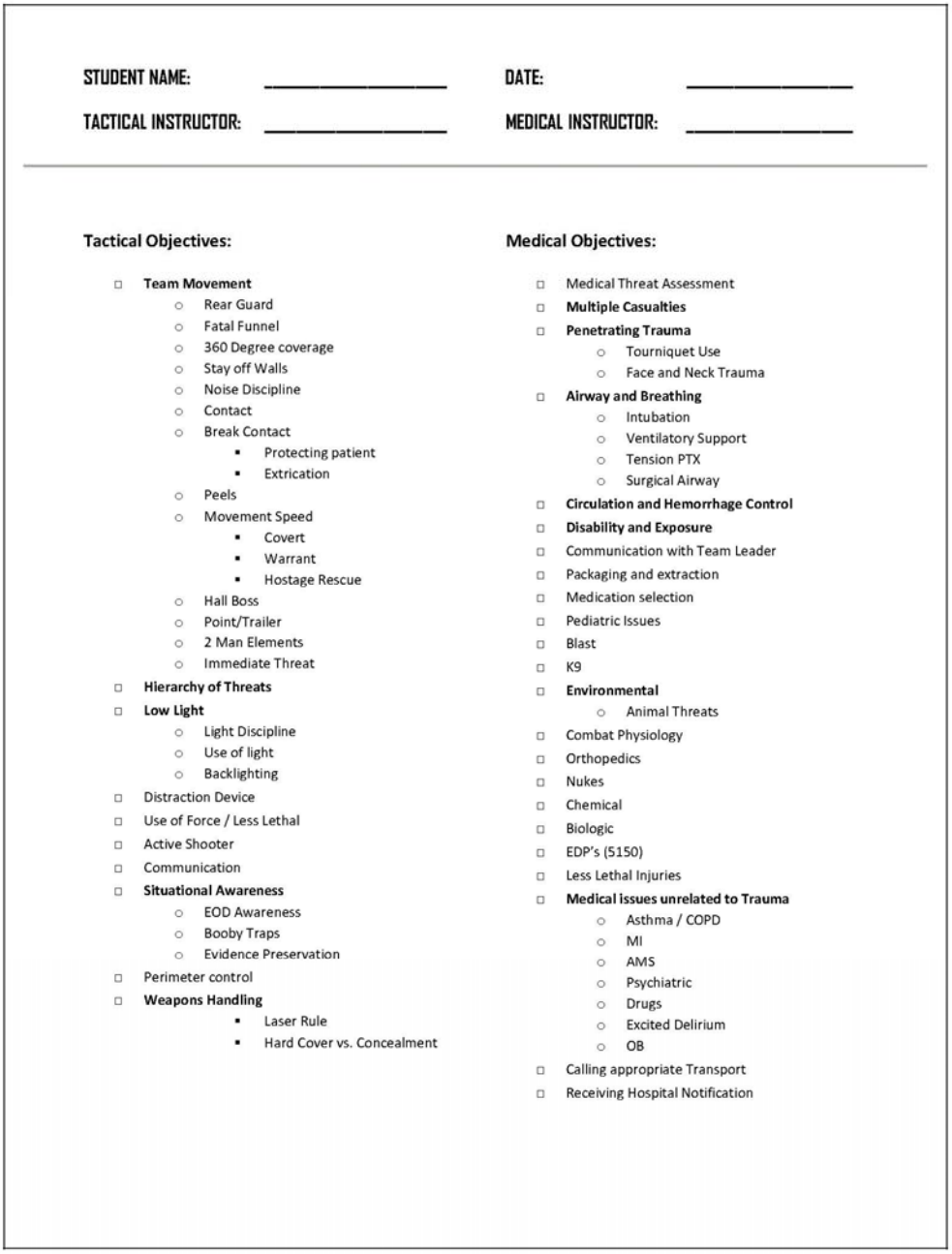
8.1 Tactical Medical Scenario Formulation

The student shall practice multiple, simulated tactical situations or scenarios in the following Tactical Medical areas using the Tactical Casualty Care Assessment and Treatment Model. Each practice scenario shall include both a tactical component and a medical component.

	Warrant Service	Barricaded Subject	Hostage Rescue	Active Shooter
External Bleeding				
Gunshot Wound, Penetrating Chest				
Gunshot Wound, Face & Neck				
Gunshot Wound, Abdominal				
MCI / Triage				
Drug / Clandestine Lab				
Chemical / Gas				
Heat Casualties				
Extremity Fractures				
Explosion Injury				
Burns				
Nerve/Organophosphate Exposure				
Difficulty Breathing				
Chest Pain				
Shock				
Seizure - PCP Exposure				
Pediatric Trauma				
Pediatric Respiratory Arrest				
Ocular Injury				
Femur Fracture (Long bone Fx.)				
Adult Respiratory Arrest				
Anaphylactic Shock				
Snake Bite				
Officer Down-Unknown Cause				
Self Inflicted GSW to Head				
Casualty Evacuation and Ambulance/Air Amb Turnover				
Special Problems				

8.2 Evaluation Forms

Instructors should utilize standard evaluation forms for the standardized review of tactical medical scenario curriculum.



STUDENT NAME: _____ DATE: _____

TACTICAL INSTRUCTOR: _____ MEDICAL INSTRUCTOR: _____

Tactical Objectives:

- **Team Movement**
  - Rear Guard
  - Fatal Funnel
  - 360 Degree coverage
  - Stay off Walls
  - Noise Discipline
  - Contact
  - Break Contact
    - Protecting patient
    - Extrication
  - Peels
  - Movement Speed
    - Covert
    - Warrant
    - Hostage Rescue
  - Hall Boss
  - Point/Trailer
  - 2 Man Elements
  - Immediate Threat
- **Hierarchy of Threats**
- **Low Light**
  - Light Discipline
  - Use of light
  - Backlighting
- Distraction Device
- Use of Force / Less Lethal
- Active Shooter
- Communication
- **Situational Awareness**
  - EOD Awareness
  - Booby Traps
  - Evidence Preservation
- Perimeter control
- **Weapons Handling**
  - Laser Rule
  - Hard Cover vs. Concealment

Medical Objectives:

- Medical Threat Assessment
- **Multiple Casualties**
- **Penetrating Trauma**
  - Tourniquet Use
  - Face and Neck Trauma
- **Airway and Breathing**
  - Intubation
  - Ventilatory Support
  - Tension PTX
  - Surgical Airway
- **Circulation and Hemorrhage Control**
- **Disability and Exposure**
- Communication with Team Leader
- Packaging and extraction
- Medication selection
- Pediatric Issues
- Blast
- K9
- **Environmental**
  - Animal Threats
- Combat Physiology
- Orthopedics
- Nukes
- Chemical
- Biologic
- EDP's (5150)
- Less Lethal Injuries
- **Medical issues unrelated to Trauma**
  - Asthma / COPD
  - MI
  - AMS
  - Psychiatric
  - Drugs
  - Excited Delirium
  - OB
- Calling appropriate Transport
- Receiving Hospital Notification

9.0 TACTICAL MEDICINE FINAL COMPETENCY TESTING

9.1 Final Tactical Medicine Scenario Competency Testing

The student shall demonstrate competency in six (6) tactical situations or scenarios in the following Tactical Medical simulated areas using the Tactical Casualty Care Assessment and Treatment Model.

Tactical Components
High Risk Warrant Service
Barricaded Subject
Hostage Rescue
Active Shooter

Medical Components
Treatment of hemorrhage
Airway management
Chest trauma
MCI
Nerve Agent
Clandestine Lab
Face / Neck wounds
Blast Injuries
GSWs
Extremity penetrating wounds
Extraction

9.2 Testing Forms

Instructors should utilize standard forms for the individual student evaluation of final tactical medical competency testing using the tactical casualty care assessment and treatment model.

10.0 TACTICAL CASUALTY CARE ASSESSMENT AND TREATMENT MODEL

10.1 Tactical Casualty Care Assessment and Treatment Model

Modified for Law Enforcement Use from the Combat Casualty Care Program
U.S. Army Combined Arms Center, Ft. Leavenworth, KS – 2007

Assessment and Treatment Guidelines

Tactical casualty care during law-enforcement special operations is performed in three phases. The first is situational awareness and scene safety; the second is victim assessment, evaluation and field care. The third is phase is extraction, evacuation and transport.

In the initial phase, you are or are about to enter a tactical situation and a possible crime scene. Your safety is paramount and although the possibility exists that you or other officers are or at some point under hostile fire is unlikely however, the possibility does exists. The tactical medic must at all time be fully aware of the surroundings and any potential threats. The likelihood of having to draw your weapon and engage a suspect with deadly force is extremely unlikely. If this situation does present itself, your departmental policy and training will determine if lethal force is indicated.

In the second phase, you and your victim/s are considered relatively safe, and you will be able to provide emergency medical care based on your scope of practice, level of training and equipment carried with you. Begin to make extraction decisions as you evaluate and treat the victim. Inform the team leader of your findings and when you plan to extract the victim.

In the third and final phase, the victim/s are extracted from the scene and evacuated to the appropriate method of transportation for delivery to a medical treatment facility capable of treating the injury. Transporting the victim to the nearest hospital may or may not be in best interest of emergency care. Trauma is a surgical disease and is treated in the operating room not in the emergency room. Make every attempt to transport a patient with penetrating trauma to a hospital with trauma services. Try and achieve the platinum half hour.

1. CARE UNDER FIRE / SITUATIONAL AWARENESS

- Determine if your surrounding are free of immediate life threatening concerns.
- Do not attempt to provide first aid if your own life is in imminent danger.
- If a spine Injury is suspected, do not move the victim unless to preserve life. In law enforcement tactical situations penetrating trauma is by far the greatest fear and it is the most likely threat to

the victim's life is massive hemorrhage from penetrating trauma.

- In a tactical situation, if you find a victim with no signs of life (no pulse, not breathing) Do not attempt to secure or restore the airway. Do not continue first aid measures.
- Universal Precautions for body substance isolation and medic safety using personal protective equipment is essential.

A. **Situational awareness before providing medical treatment.**

B. **Determine if the victim has signs of life.**

C. **Provide necessary emergency medical care.**

1. Defend yourself and your patient if necessary.

2. Use appropriate hard cover or concealment is possible.

3. Consider self-aid to stop hemorrhage, if possible. If the victim is unable to move and you are unable to move the victim to hard cover and the victim remains under the threat of direct fire, tell the victim to try not to move and "play dead". This may confuse and misdirect the shooters field of fire.

4. If the victim is unresponsive, move the victim, weapon/s, and mission-essential equipment to hard cover, as the situation allows.

5. Prevent the victim from sustaining additional wounds or injuries.

6. Provide reassurance and encouragement.

7. Apply appropriate hemorrhage control techniques depending on the wound pattern.

8. If the victim has severe hemorrhage from a limb or has suffered amputation of a limb, apply a tourniquet before moving the victim.

9. Extricate the victim, weapon/s, and any mission specific equipment.

10. Revaluate the victim and hemorrhage control measures.

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2. TACTICAL FIELD CARE

- Tactical field care is delivered by the medic when immediate threats are suppressed and the scene is relative safe. Tactical field care also applies to those tactical situations in which an injury or illness has occurred during the mission not related to hostile fire. Available medical equipment may be limited or mission restricted to that carried into the field by the Medic.
- In the rare event of nerve agent poisoning or chemical attack, stop the evaluation, and take the necessary protective measures, and begin first aid.
- In all situations communicate the medical situation to the team leader and ensure that the tactical situation allows for time to perform any medical procedure.

A. **Check for responsiveness.**

1. Inquire in a loud, but calm, voice: "Are you OK" Gently shake or tap the victim.

2. Determine the level of consciousness by using **AVPU** system:

   A = **Alert**
   V = responds to **Voice**
   P = responds to **Pain**
   U = **Unresponsive**.

Check a victim's response to pain, rub the breastbone briskly with a knuckle or squeeze the first or second toe over the toenail.

3. If the victim is conscious, ask where his/her body feels different than usual, or where it hurts. If the victim is conscious but is choking and cannot talk, stop the evaluation and begin treatment.

4. If the victim is unconscious, continue with treatment.

B. **Position the victim and open the airway.**

C. **Assess for breathing and chest injuries.**

1. Look, listen, and feel for respiration. If the victim is breathing, insert a nasopharyngeal airway and place the victim in the recovery position. Use suction, if available to maintain airway as needed.

2. Expose the chest and look for symmetrical chest movement and for any other wounds.

   a. If the victim has a penetrating chest wound and is breathing or making an effort to breathe, stop the assessment and apply an occlusive dressing/chest seal.

   b. Monitor the victim for increasing respiratory distress. If necessary, perform needle chest decompression on the same side as the injury.

   c. Extricate and transport with the affected side down, if possible.

D. **Identify and control bleeding**.

1 Examine the victim for bleeding.

2. Remove only the minimum amount of clothing necessary to expose and treat injuries.

3. Check for blood-soaked clothes.

4. Look for entry and exit wounds.

5. If the victim is unable to be move or rolled on their side for a visual inspection. Place your gloved hands behind the victim's neck and pass them upward toward the top of the head. Check for blood or brain tissue on your hands from wounds.

6. If the victim is unable to be move or rolled on their side for a visual inspection. Place your hands behind the victim's shoulders and pass them downward behind the back, the

thighs, and the legs. Check for blood on your hands from wounds.

7. If hemorrhage is present, stop the evaluation and control the bleeding. Apply a tourniquet, trauma dressing, and/or Hemostatic agent as indicated.

8. Dress all wounds, Assess and Treat for shock, as indicated.

9. Position the victim with feet elevated. Maintain core body temperature by covering victim with blanket if available.

10. Start Intravenous Access with IV Normal Saline or Saline Lock. If the tactical situation and time permits. Do not delay extraction or evacuation for procedures that will not improve outcome.

E. **Examine for spinal injuries, fractures burns, or other injuries through a full SECONDARY SURVEY.**

1. Check for open or closed fractures by looking for swelling, discoloration, deformity, or unusual body position. If a suspected fracture is present, stop the evaluation and apply a splint or immobilize spine.

2. Check for burns and treat as indicated.

3. Administer pain medications and antibiotics if indicated.

3. CASUALTY EVACUATION

- **Evacuate the victim to an appropriate medical treatment facility**

1. Use soft litter unless not indicated with suspect spinal injury.
2. Confirm egress path is safe and secure.
3. Attempt to interface with civilian EMS with minimal public exposure.
4. Contact hospital for pre-hospital report.
5. Complete documentation for patient contact.
6. Assist in transport of patient to the closest and most appropriate hospital.

11.0 TACTICAL MEDICINE OPERATIONAL EQUIPMENT RECOMMENDATIONS

11.1 Individual Tactical Team Member ***

Each individual on a team should have the following minimum equipment carried by the individual operator.

Quantity	Item Description	
	INDIVIDUAL TACTICAL TEAM MEMBER	
1	Medical Bag	
10	Gloves (Trauma, latex-free [5 pair])	
1	N95 Mask (PPE Kit)	
2	Airway, Nasopharyngeal, 28f size with water-based lubricant	
2	Tourniquet system	
1	Emergency Trauma Dressing	

11.2 TEMS, Basic Life Support ***

Basic Life Support Personnel (at the Emergency Medical Technician level) should have all items included in the Basic Life Support Equipment Recommendations available.

Quantity	Item Description	
	BASIC (EMR and EMT)	
1	Medical Bag	
10	Gloves (Trauma, latex-free [5 pair])	
1	N95 Mask (PPE Kit)	
1	Protective eyewear – wraparound/ballistic grade	
2	Airway, Nasopharyngeal, 28f size with water-based lubricant	
2	Gauze (Petrolatum 3” x 18”)	
2	Tourniquet systems (CAT)	
2	Emergency Trauma Dressing	
2	Chest Seal (Asherman or Hyfin)	
4	Gauze (Compressed, Vacuum Sealed)	
1	Shears (Trauma)	

1	Stethoscope and blood pressure cuff	
1	Tape (Surgical, Adhesive, 2")	
2	Dressing, Sterile (Kerlix or Kling)	
2	Light, Tactical Exam – consider helmet mounted and handheld	
1	Bag-Valve-Mask (Collapsible)	
1	Suction, Hand-Held	
1	Elastic Compression Bandage	
1	Splint, Semi-rigid, moldable	
1	Blanket, Disposable (consider thermal reflective material)	
1	Litter, Evacuation – tactical or soft litter	
6	Triage Tags	
1	Tactical Casualty Care Assessment and Treatment Card	
1	TacMed BLS Equipment Pack Inventory Sheet	
1	Compact AED (waveform display preferred)—immediately available	
2	AED Patches	

11.3 TEMS, Advanced Life Support***

Advanced Life Support Personnel should have available all Items included in the Basic Life Support Equipment Recommendations, plus those listed in the ALS recommendations.

Quantity	**Item Description**	
	ADVANCED (Paramedic and Physician)	
2	Needle Decompression Kit (3.25" needle)	
2	IV start kits or necessary components	
2	IV Constriction Band	
2 ea	Intravenous access catheters (Size 14 -20)	
1	Needle Cricothroidotomy Kit or CricKit	
1	Intraosseous device (adult and pediatric)	
1	Airway, perilaryngeal (King LT)	
1	Laryngoscope Kit	
2	Endotracheal Tube (8 mm cuffed)	
1	Bougie (flexible intubation guide)	
1	ETT Restraint	
1	End Tidal CO2 Detector	
1	ETT Verification Device	
2	Lock (IV, Saline, Tactical)	
1	Saline Flush (50 ml)	
2	IV Fluid x 500 ml (Normal Saline) with IV tubing	
1	Hemostatic Agent (Combat Gauze)	
1	Hemostatic Agent (WoundStat)	
1	Sharps Container (Small)	

4	Pre-Hospital Field Forms	
1	TacMed ALS Equipment Pack Inventory Sheet	
	ADVANCED LEVEL PHARMACEUTICALS	
1	Aerosolized Beta 2 Specific Bronchodilator (ie Albuterol MDI)	
1	Aspirin, Chewable 80 mg (1 bottle)	
2	Atropine Sulfate, 1 mg	
1	Dextrose 50%, 25 G, Pre-load	
1	Diphenhydramine, 50 mg	
1	Epinephrine, 1:1000 1 mg	
1	Epinephrine for injection, 1:10,000 1 mg	
1	Glucagon, 1 mg/unit	
1	Midazolam (Versed), 20 mg or Diazepam (Valium), 20 mg	
2	Morphine Sulfate, 10 mg/ml	
1	Naloxone, 2 mg	
2	Nerve agent antidote auto-injector, Mark I	
1	Nitroglycerine, 1/150 gr	

**** POST and EMSA do not endorse any specific products or brands. The medical director, in conjunction with the local EMS agency, should determine appropriate medications, supplies and equipment.**

*****Some vendors carry and sell these kits as a pre-packaged set.**

12.0 TACTICAL MEDICINE TRAINING PROGRAM SAMPLE EQUIPMENT LIST

12.1 Tactical Medicine Training Program Equipment List

This list identifies sample minimum supplies, equipment, and materials that are required to conduct an 80-hour POST and EMSA approved tactical medicine training program for 50 students.

This sample list should be considered when planning and conducting a course. Quantities and brands are left to the discretion of the tactical medicine training program.

12.1.1 Classroom Equipment

	Classroom facilities for 50 participants
	Comfortable chairs and tables for 50 participants
50	student course manuals
12	Instructor manuals
1	Tower computer and back up laptop computer
1	Monitor for tower computer
1	High definition digital projector
1	High quality projector screen
1	Wireless remote control for computers
2	high definition video monitors
1	DVD and VHS tape player
1	Podium with wireless microphone system
1	High quality audio sound system and speakers for classroom
4	Extension cords
6	Flip charts with easel and markers
1	PowerPoint presentations on CD-Rom or hard drive

12.1.2 Range & Firearms Training Equipment

12	Sets of Hearing protection for instructors and Range Master: Peltor tactical series or equivalent
12	Sets Eye protection for instructors and Range Master:
	Wiley X Ballistic Eyewear or equivalent
100	Hearing protection for students (100 sets of foam ear plugs)
50	Eye protection for students (1 set per student with 5 spares for breakage)
	Range facilities with a minimum of 4 separate sub ranges.
50	pistols
9	Sets of Flashlights Lights for instructors and Range Master
50	Student Flashlights
80	sets of spare batteries lithium batteries for the flashlights
10	sets of spare bulbs for the flashlights
50	holsters for Pistols
50	tactical holster duty belts
50	Dual magazine pouches
2	Tactical pistols with threaded barrels and suppressors
25	Heckler & Koch MP5A3 Submachine Guns
60	MP5 Submachine Gun 30 round magazines
2	Heckler & Koch MP5A2 Silenced Submachine Guns
2	Heckler & Koch MP5PDW Submachine Guns with Suppressors
25	Heckler & Koch MP5 30 round magazine clamps
25	Heckler & Koch MP5 Submachine Gun 3 point slings
25	Surefire MP5 Forend 6P lights
8	Simunition Kits for the MP5 Submachine Gun
4	Simunition Kits in 38 caliber
15	sight adjustment tools
1	Sniper Rifle and Sling in 308 or 300 Winchester Magnum / WSM
	Ammunition for Sniper Rifle
	Ultrasonic Parts cleaner for weapons systems
2	MP5SD suppressor cleaning brushes
50	cleaning rods and 9 mm brushes
500	100% cotton 9 mm, 40 cal and 45 ACP cleaning patches
6	bottles of Breakfree
6	bottles of Hoppes # 9
2	large cases for firearms cleaning supplies
1	armorer’s kit and tool box for SIG 229 and 226 pistols
1	armorer’s kit and tool box for Heckler & Koch MP5A2, MP5A3, and MP5SD Submachine Guns
2	armorer’s manuals for each weapons system used

•	• Pistol
•	• SMG
•	• Shotgun
•	• Carbine
•	• Precision Rifle
1	MP5 Spare parts box with extractors, ejectors, firing pins, firing pin springs, bolt heads, bolt carriers, take down pins and rollers to services 5 to 6 guns
5	spare MP5 SEF or Navy full auto trigger groups
6	pelican 5150 cases with locks for pistols
6	pelican 5150 cases with locks for transporting MP5 Submachine Guns
40	Steel target systems
8	cans assorted color spray paint
40	Target stands
250	cardboard backing for paper targets
500	SEB style paper targets
6	heavy duty staple guns
8 rolls	duct tape
40 sets	of Ballistic Body level IIIA Armor for participants
8 sets	of Ballistic Body Armor level III A for Instructors
45,000	9mm 40 cal and 45 ACP ammunition rounds
1000	Simunition FX Rounds
4	Water and ice chest cooler for each sub range
4	Safety equipment: Comprehensive First Aid Kit for each active Range / Sub Range
4	Safety equipment: Fire Extinguisher for each active Range / Sub Range

12.1.3 Tactical - Medical Scenario Equipment

6	Safety equipment: Comprehensive First Aid Kit for each active Station
6	Fire Extinguisher for each active station
6	sets handcuffs / flexi-cuffs
	Wand style metal detector for each scenario for safety check
	Suitable realistic location for tactical-medical scenarios (old hotels, apartment complexes, buildings, warehouses etc)
6	Blackhawk Special Operations Medical Backpacks fully stocked each with:
•	• IV tubing
•	• Crystalloid Solution

•	• Tourniquets
•	• Combine Dressings
•	• 4x4 dressings
•	• IV Catheters
•	• Airway module
•	• Trauma module
•	• Basic Medical Module
•	• Advanced Medical Module
•	• Specialty Module
•	• Splinting equipment
12	Laerdal Full Body Trauma Mannequins
12	Laerdal Full body Trauma Mannequins carry bags
2	Laerdal Pediatric Trauma Mannequins
2	Laerdal Pediatric Trauma Mannequins
8	Portable flexible tactical litter kits
50	Gas Masks with carry bags
4	pelican 5150 cases for Gas Masks
1	Gas Mask cleaning and repair kit
6	Blank pistols .22 cal
300	Rounds .22 cal blanks
6	Blank pistols 8mm
300	rounds 8 mm blanks
40	LYT's in 9mm, 40 cal, 45 cal, and 223
6	sets of police officer uniforms for trauma manikins
6	sets of SWAT officer uniforms for trauma manikins complete with tactical vest, body armor, duty weapon
12	sets of civilian clothing for trauma manikins
6	Scenario Props Set which includes the following; booby traps, IED's sawed off shotgun, old handguns, training knives, rubber snakes handcuffs, flex cuffs, flashlights, used detcord, claymore mine, large infant dolls, timers, wire, old circuit boards, duct tape
6	Simulaids Moulage Kits complete with large assortment of trauma and gunshot wound overlays, makeup and artificial blood
1	Clandestine Drug Lab complete set up for methamphetamine manufacture including all glassware, heating mantels, flasks, beakers, condenser, separatory funnel, graduated cylinders, ether cans, acetone cans and chemicals (Note: Possession of this material is a felony by non-law enforcement personnel)
6	sets of Motorola Talk - About Radios
6	Motorola Talk - About radios chargers with spare batteries

6	Large Orange Cones to marks scenario stations
6	First Aid Kits for scenarios stations
6	Coolers for ice water at scenario stations
10	DEF Tec 25 Flash Bangs (NOTE: This is a BATF regulated item and requires a BATF destructive device permit as well as a California Department of Justice permit (DOJ) and is a felony for possession by non-law enforcement personnel)
2	Canine intubation manikins
1	High Definition Digital Camcorder with tapes
2	Digital SLR Cameras
2	High Definition Flat Panel Monitors

12.1.4 Medical Equipment

6	Tactical Medical vests
6	adjustable size cervical collars
4	Backboards
12	laryngoscope handles
24	Miller laryngoscope blades
24	McIntosh laryngoscope blades
8	sets of spare AA batteries for laryngoscope handles
4	Laerdal Intubation Training Mannequins heads
2	LMA Intubation Training Mannequin head
15	LMA Tubes various sizes
1	Combitube Intubation Training Mannequin head
10	Combitubes various sizes
40	Surgical Airway sets with scalpels, # 11 and # 15 blades with scissors, curved hemostats and pickups with teeth.
80	Chux pads
4	boxes of latex and nitrile exam gloves S, M, L, XL
80	Hog tracheas for surgical airway workshop
1	cooler with dry ice for storage of fresh hog tracheas
30	Israeli Bandages (Emergency Bandage)
10	C.A.T tourniquets
15	MAT Tourniquets
30	Small Ace bandages
30	Large Ace bandages
6	Adult View Max laryngoscope handles
6	Pediatric View Max laryngoscope handles

6	Adult View Max laryngoscope handles
6	Pediatric View max laryngoscope handles
30	Cook retrograde intubation sets
6	McGill Forceps
6	Gum Elastic Bougies
12	sets of adult Ambu Bags
12	sets of pediatric Ambu Bags
1	Full Broselow Pediatric Advanced Life Support Kit with Broselow Tape
6	Boxes of 4 x 4 dressings
6	Boxes of 2 x 2 dressings
8	Chemical Ice Packs
100	Band Aids Standard Size (50 minimum per week)
40	Band Aid Large (20 minimum per week)
4	Peroxide 2 bottles per week
4	Betadine 2 bottle per week
4	Cook Wadwahs
6	Blackhawk Special Operations Medical Backpacks fully stocked each with:
•	• IV tubing
•	• Crystalloid Solution
•	• Tourniquets
•	• Combine Dressings
•	• 4x4 dressings
•	• IV Catheters
•	• Airway module
•	• Trauma module
•	• Basic Medical Module
•	• Advanced Medical Module
•	• Specialty Module
•	• Splinting equipment
	Vacuum Sealer for equipment with sufficient supply of vacuum packaging

12.1.5 Tactical Equipment

1	Armored Vehicle BEARCAT
1	Hydraulic breeching tool
1	Super Halligan tool
1	Mobile home Breacher
1	Thor's Hammer
1	1 Break - N -Take Tool
1	1 Breachers Tactical Backpack Kit

1	1 Heavy door battering ram
1	1 Steel Wedge
1	1 Pry bar
1	1 Sledge Hammer
8-10	Shape charges
4	Water Charges
20 feet	DETCORD (restricted item requires BATF permit)
1	Benelli M1 Super 90 shotgun for breeching
1	Remington 870 shotgun for breeching
25	shot lock 12 gauge rounds
1	Portable Electric Honda Generator
1	100 Foot heavy duty extension cords
1	gas can for generator fuel
1	set outdoor portable construction halogen light system
1	Class 4 Body Armor for demonstration with ceramic plates
1	Ballistic Helmet
1	Nomex Balaclava
1	pair Nomex Gloves
1	pair tactical goggles
1	pair knee pads
1	pair elbow pads
1	remote camera system
1	flash bang pole
1	tactical service knife
1	drop holster with duty belt

APPENDICIES

APPENDIX A AUTHORIZED SCOPE OF PRACTICE FOR EMS PERSONNEL REFERENCE

13.1 Authorized Scope of Practice for EMS Personnel

	EMT-I	EMT-II	PARAMEDIC
Minimum Scope of Practice	(1) Evaluate the ill and injured (2) Render basic life support, rescue and emergency medical care to patients. (3) Obtain diagnostic signs to include, but not be limited to, the assessment of temperature, blood pressure, pulse and respiration rates, level of consciousness, and pupil status. (4) Perform CPR, including the use of mechanical adjuncts to basic CPR. (5) Use the following adjunctive airway breathing aids: (A) oropharyngeal airway; (B) nasopharyngeal airway; (C) suction devices; (D) basic oxygen delivery devices; and (E) manual and mechanical ventilating devices designed for prehospital use. (6) Use various types of stretchers and body immobilization devices. (7) Provide initial prehospital emergency care of trauma. (8) Administer oral glucose or sugar solutions. (9) Extricate entrapped	Perform all EMT-I skills plus: (1) Perform pulmonary ventilation by use of the esophageal airway. (2) Institute intravenous (IV) catheters, needle or other cannulae (IV lines), in peripheral veins. (3) Administer intravenous glucose solutions or isotonic balanced salt solutions, including Ringer's lactate solution. (4) Obtain venous blood samples for laboratory analysis. (5) Apply and use pneumatic antishock trousers. (6) Administer, using prepackaged products where available, the following drugs: (A) Sublingual nitroglycerine preparations; (B) syrup of ipecac; (C) lidocaine hydrochloride; (D) atropine sulfate; (E) sodium bicarbonate; (F) naloxone; (G) furosemide; (H) epinephrine; and (I) 50% dextrose. (7) Defibrillate a patient in ventricular fibrillation. (8) Cardiovert an unconscious patient in ventricular tachycardia.	All EMT-I and IIs skills and medications plus: (1) Laryngoscope (2) Endotracheal (ET) intubation (adults, oral) (3) Glucose measuring (4) Valsalva's Maneuver (5) Needle thoracostomy (6) Cricothyroidotomy (7) Nasogastric intubation (adult) (8) Use glucose measuring device. (9) Utilize Valsalva maneuver. (10) Monitor thoracostomy tubes. (11) Monitor and adjust IV solutions containing potassium, equal to or less than 20 mEq/L. (12) Administer approved medications by the following routes: intravenous, intramuscular, subcutaneous, inhalation, transcutaneous, rectal, sublingual, endotracheal, oral or topical. (13) Administer, using prepackaged products when available, the following medications: 1. 25% and 50% dextrose; 2. activated charcoal; 3. adenosine; 4. aerosolized or nebulized beta-2 specific bronchodilators; 5. aspirin;

	EMT-I	EMT-II	PARAMEDIC
	persons. (10) Perform field triage. (11) Transport patients. (12) Set up for ALS procedures, under the direction of an EMT-II or Paramedic. (13) Perform AED when authorized by an EMT AED service provider. (14) Assist patients with the administration of physician prescribed devices, including but not limited to, patient operated medication pumps, sublingual nitroglycerin, and self-administered emergency medications, including epinephrine devices.		6. atropine sulfate; 7. pralidoxime chloride; 8. calcium chloride; 9. diazepam; 10. diphenhydramine hydrochloride; 11. dopamine hydrochloride; 12. epinephrine; 13. furosemide; 14. glucagon; 15. midazolam; 16. lidocaine hydrochloride; 17. morphine sulfate; 18. naloxone hydrochloride; 19. nitroglycerin preparations, except intravenous, unless permitted under (c)(2)(A) of this section; 20. sodium bicarbonate.
Notable Optional Skills (added at the local level)	Manual Defibrillation, under direct supervision of a paramedic. Esophageal-tracheal airway device (combitube) Bronchodilators Epi-pen Establish IV access under direct supervision of a paramedic. Naloxone Mark 1 Kit Glucagon Aspirin Activated Charcoal	Endotracheal (ET) intubation Laryngoscope Use glucose measuring device. Gastric suction Additional medications	Local EMS agencies may add additional skills and medications if approved by the EMS Authority

Public safety first aid and CPR trained individuals do not have a defined scope of practice in regulations. Because there is such a wide range of training available to public safety personnel, from a 15 hour first aid and CPR course up to a 60 hour first responder course, public safety personnel who do not have at least an EMT-I certification are limited to basic first aid or a scope of practice approved by a LEMSA medical director which is dependent on the level of training.

APPENDIX B EMS LEGAL AUTHORITIES FOR EMS PERSONNEL REFERENCE

14.1 Legal Authorities for Tactical Medic Standards

First Aid & CPR Training Standards for Public Safety Personnel	
Health and Safety Code	§ 1797.182 (Life Guards and Firefighters) § 1797.183 (Peace Officers)
Penal Code	§ 13518 (first aid & CPR training requirement)
California Code of Regulations	Title 22, Division 9, Chapter 1.5 (Topics and hours of training requirements)
EMT-I	
Health and Safety Code	§ 1797.170 (training and scope of practice) § 1797.175 (continuing education standards) § 1797.210 (certification by LEMSA medical director) § 1797.214 (optional scope of practice) § 1797.215 (CPR renewal periods) § 1797.216 (public safety certifying authorities) § 1797.221 (trial study by LEMSA) § 1798 (LEMSA medical control) § 1798.200 (violations for discipline)
California Code of Regulations	Title 22, Division 9, Chapter 2 (training, scope of practice, certification, recertification standards)
EMT-II	
Health and Safety Code	§1797.171 (training and scope of practice) § 1797.175 (continuing education standards) § 1797.210 (certification by LEMSA medical director) § 1797.214 (optional scope of practice) § 1797.215 (CPR renewal periods) § 1797.218 (LEMSA authorization for EMT-II program) § 1797.220 (LEMSA policies & procedures for medical control) § 1797.221 (trial study by LEMSA) § 1798 (LEMSA medical control) § 1798.200 (violations for discipline)
California Code of Regulations	Title 22, Division 9, Chapter 3 (training, scope of practice, certification, recertification standards)

Paramedic	
Health and Safety Code	§1797.172 (training, scope of practice, licensure) § 1797.174 (continuing education standards for paramedics) § 1797.175 (continuing education standards) § 1797.178 (must be affiliated with EMS system to practice) § 1797.194 (state licensure of paramedics) § 1797.214 (optional scope of practice) § 1797.210 (paramedic fines) § 1797.218 (LEMSA authorization for paramedic program) § 1797.221 (trial study by LEMSA) § 1798 (LEMSA medical control) § 1798.2 (medical direction from base hospital) § 1798.3 (medical direction from alternate base station) § 1798.200 (violations for discipline)
California Code of Regulations	Title 22, Division 9, Chapter 4 (training, scope of practice, licensure, licensure renewal, accreditation)